

M.G. Lightning – Solar Energy Consulting Services

M.G. Lightning Electrical Engineering Ltd has developed an expertise in solar consulting. Starting with the design and permitting of small commercial systems then moving to medium and large utility scale fields, the company began offering an array of consulting services to developers, land owners and banking institutions.

Beginning with site selection, MGL analyses candidate sites in conjunction with statutory specialists to ascertain the suitability of the site for solar energy production. MGL engineers search for and analyze all meteorological information, ascertaining the most accurate data for calculating site yield, using the latest in solar simulation software. After a site visit, using topographic maps, the site is further analyzed before a detailed report is issued defining the feasibility and financial output of the site. MGL has aided in choosing between many candidate fields, offering comparison matrices allowing the developer to choose the best candidate field for his project.

MGL offers accelerated Acceptance Test services to owners, developers and contractors interested in ascertaining the long term ability of the PV Power field to yield according to the software simulated yield generated during the design process. This procedure allows for testing a PV power station over any single 30 day period during any season, despite the vast differences of PV performance over the year. MGL engineers re-run the software simulations as per the as-made installation thereby calculating a Performance Ratio. An acceptance test procedure is then run, calculating daily normalized Performance Ratio and comparing to the theoretical calculated PR. After 30 days of testing, statistical analysis is performed to ascertain the probability that the field will perform to specification over the calculated life span.

MGL offers consulting services to investors interested in purchasing existing PV power fields. MGL engineers reverse engineer the site, inputting the data into solar simulation software to ascertain the projected theoretical yield. Historical data is then analyzed to ascertain to what level the plant has been producing and to establish that production rhythms and levels are in line with theoretical projected data. An accelerated acceptance test procedure is performed to establish probability for continued future behavior. In depth site visits are performed, cataloguing the equipment used and the quality of the installation, foundations are checked and compared with soil samples, shading issues present and future are examined. Finally, a report is written describing the quality of the field, the inherent shortcomings, possible future investments required and an opinion as to the probability of realizing future yields.



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